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Original.

TRIONAL IN NEURASTHENIC INSOMNIA.

BY DR. CLAUS,

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lain Hospital and to the Female In-
sane Asylum in Ghent.

Observations with regard to the hypnotic effects of trional multiply from day to day. The contributions of Baumann, Kest, Schaefer, Horvath, Randa, Koppers, Collatz, Mahon, Mattison, Beyer and others all express themselves favorably as to the efficiency of this remedy. We have, on our part, tried trional as a hypnotic in children, and consider ourselves justified in the conclusion, that in the nervous forms of insomnia it is a reliable hypnotic free from injurious effects.

These are not isolated observations; trional is recognized in our newest classical works.

Oppenheim speaks as follows of the treatment of sleeplessness in neurasthenics in his text book on nervous diseases: "If medicinal treatment is called for the bromine preparation, as for instance bromine water, should be first tried. As efficient hypnotics, paraldehyde in doses of 3.0 to 6.0 gm., sulfonal, 1.0 to 3.0 gm, and especially trional, deserve mention. Thus far I have derived only good results from the latter. Amylene hydrate is also a serviceable hypnotic; the others are less entitled to praise. Morphine and chloral can usually be dispensed with."

Among hypnotics, therefore, the most favorable results are ascribed to trional by Oppenheim, the experienced Berlin neurologist.

Wilhelm says: "I would mention among the multitude of remedies employed in recent times in the neurological clinics two other drugs, trional and tetronal, both of which have an action similar to that of sulfonal. Of these trional is given in single doses of 2.0 gm., finely pulverized, in 200.0 gm. fluid at night time." According to Wilhelm sulfonal belongs to the least harmful hypnotics, which are prescribed for neurasthenic sleeplessness.

Trional has the advantage over sulfonal that is devoid of disagreeable after-effects.

George Guinon also incidentally recommends trional and sulfonal.

Zicheu, in his excellent book on "Psychiatrics" (1894), remarked as follows: "For neurasthenic insomnia we should employ, when the wet pack and prolonged baths prove ineffective, transverse galvanization of the head (1-2 m. a.) and effleurage to the forehead and occipital region. Only in case of necessity should drugs be resorted to. The most serviceable among these are sulfonal and trional."

It seems superfluous to us to cite other authors who have spoken favorably on the use of trional in the sleeplessness of neurasthenics. Our observations coincide with these favorable results, and like the above we regard trional as the best and least injurious hypnotic for neurasthenia.

We have employed it only in cases of real insomnia. It must not be forgotten that some neurasthenics exaggerate their ailments. If we would believe his statements he has heard the clock strike every hour of the

night, and yet, as a matter of fact, his room-mate has heard him snore vigorously at various times.

This tendency to exaggeration is peculiar to most of these patients, and characteristic of certain forms of this affection; and if this be not taken into consideration the results obtained might appear less favorable than we are warranted in regarding them.

We will not describe in detail the 30 cases observed by us. We will only select the typical cases—those which permit us to formulate certain rules for the application of this remedy, or which illustrate some points to which attention has not yet been called by authors.

In the majority of cases the patient falls asleep as soon as he is in bed, but at the end of two or three hours awakes and can obtain no further sleep for that night. Others remain awake for hours, often until morning.

How is trional to be employed in the former class of patients? Shall it be administered before the patient retires, or is it better to wait until the patient awakes? All the observations which we have made convince us that trional should be given at bedtime and not when the patient wakes up. In four typical cases we employed both methods, and found that when given on awaking trional produces a heavy sleep disturbed by dreams, while if administered at the moment the patient retires it always gives rise to a gentle and refreshing sleep.

In one case, that of a woman who had become neurasthenic from prolonged grief, we tried both methods alternately from day to day for a period of eight days. At the end of this time she refused to continue trional in this manner, and we then administered it every other day, and were assured by her that on the days she took no trional she enjoyed better sleep than when she took the drug on awaking.

After this experience we positively concluded that trional must be administered before the patient retires.

In cases in which the patient does not fall asleep and lies awake for a

number of weary hours no especial indication for the mode of application can be given. As a general rule it may be said that, even if not much excitement exists, trional must be ordered in larger doses than in patients of the first group.

An officer suffering from complete insomnia, with resulting marked irritability, has taken for three weeks 3.0 gm. trional, which produced sleep of five to six hours' duration. Since then his irritability has greatly diminished and now 2.0 gm. suffices to afford satisfactory sleep. This case has shown us the injurious influence which insomnia exerts upon the various symptoms of neurasthenia. The cerebral irritability is not only increased, but the various disturbances are enhanced, or even may be brought into existence under this deleterious influence. The same holds true of certain dyspeptic disturbances, which some erroneously consider as essential disorders of neurasthenia.

Under the use of trional the officer just referred to, who had suffered for a long time from complete anorexia, gradually regained his appetite, and at the present time, after two months' treatment, his appetite and digestion are almost normal.

This favorable influence of trional upon the digestion of restless, anxious and excited persons is a matter of regular observation—a fact which we have often verified. In two other cases of typical neurasthenia we have noted an improvement in the gastro-intestinal functions under influence of the drug.

These observations demonstrate, as Bouveret has remarked, that in many cases the neurasthenic symptoms are not subordinate to the disturbances of the digestive organs. Not infrequently, we see neurasthenic dyspepsia appear suddenly at the same time with or after the occurrence of the cardinal symptoms of neurasthenia; the headaches, sleeplessness and cerebral depression. Furthermore, the dyspeptic symptoms sometimes follow in a remarkable manner the change in the cerebral symptoms. In the three cases observed by us the

dyspepsia was directly dependent upon the insomnia. The favorable effect of trional upon the sleeplessness, and further upon the dyspepsia sufficiently testify to this.

How can facts of this kind—and they are not infrequent—be brought into correlation with the hypothesis of the subordination of the neurasthenic symptoms to the digestive disturbances? The dyspepsia is secondary; it is the consequence, not the cause of the neurosis. This is the view of Charcot. "In neurasthenics," says he, "even when habitual gastrectasis has developed, the latter is subordinate to the cardinal nervous symptoms."

In this way it is easy to explain why trional, if employed in obstinate sleeplessness, may exert a favorable effect not only upon the dyspeptic disturbances, but also upon the other disagreeable symptoms of neurasthenia. We have seen the nocturnal pollutions disappear after its administration. These pollutions had an extremely unfavorable influence upon the patient, and their disappearance contributed greatly to elevate his moral nature, and to hasten recovery. It seems to us superfluous to enter into further details with respect to the employment of trional in the insomnia of neurasthenics. We have confined ourselves to calling attention to a few points which have not been sufficiently emphasized by other observers.

Trional has always given us favorable results (thirty cases). In one case a servant maid, who in consequence of prolonged waking at night and psychical excitement had become neurasthenic, trional in 1.0 gm. doses during six weeks had an excellent effect.

For reasons which we were unable to ascertain and despite the administration of larger doses it then suddenly lost its effect. We found it necessary to resort to other hypnotics, which failed to afford the expected result. The patient has since then left us.

The dose varies according to the form of insomnia and according to the age. On the average 1.5 gm. are sufficient.

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A CASE OF EXCISION OF THE ELBOW-JOINT FOR FRACTURE OF CONDYLE OF HUMERUS, WITH POSTERIOR DISLOCATION OF THE BONES OF THE FOREARM.

BY H. R. WHARTON, M. D.

Mrs. W., aged thirty-five years, received a fall April 29, 1894, sustaining an injury of the right elbow, which was diagnosed as a dislocation with fracture of the condyles of the humerus. She was sent to me in October, 1894, and upon examination of the arm I found marked deformity in the region of the internal condyle of the humerus and a posterior dislocation of both bones of the forearm, the arm being rigidly fixed at a right angle, and the patient complained of constant pain in the elbow.

I advised excision of the elbow-joint as the operation most likely to give her a useful arm.

On November 8, 1894, I excised the right elbow-joint, finding that there had been a fracture involving

the internal condyle of the humerus, and that the ulna and radius were dislocated backward, a large amount of callus had been thrown out, which made the operation a difficult and tedious one.

The patient did well after the operation; the wound healed promptly, and at the end of four weeks the patient had a fair range of motion in the new joint. You will notice on examining the arm that the patient has remarkably free flexion and extension of the arm, also good supination and pronation, and as the result of operation has attained a very useful arm.

LOOSE CARTILAGE IN KNEE-JOINT.

BY H. R. WHARTON, M. D.

J. W., aged 24 years, was sent to me with the history, that for some years he had suffered from a movable body in the left knee-joint which at times interfered with the motion of the joint.

He stated that four years ago he had wrenched his left knee by stepping upon a stone which rolled under his foot, and that after the accident the knee was bent, and could not be straightened. This condition existed for four months; at the end of this time he regained use of the knee-joint, but noticed the presence of a body which moved about in motions of the joint, and at times entirely disappeared. At times its presence caused him more or less disability.

I had no difficulty in locating the position of the body, and after finding it cut down upon it and removed it. I show the body removed, which is quite a large-sized one.

This case is of interest in that it points to the possible traumatic origin of some cases of loose cartilages in the joints. They are usually supposed to originate from the villous fringes of the sigmoid membrane; but some authorities, such as Paget and Teale, have contended that they might originate from detached portions of the articular cartilage of the joints.

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HOW ABOUT THE LITTLE FISHES?

The late exchanges from across the water inform us that in England the whole profession is in a red-hot ferment on the hospital and dispensary question. The latest echo from our transatlantic cousins comes to us in the form of a protest, presented by London practitioners against opening pay wards in the Great Northern Hospital. Practitioners in that hospital district, learning of the new scheme about to go into effect, called an indignation meeting and sent a protest to the Board of Managers against admitting to the wards of a public charity those who were able to pay for nursing and attendance, as it was in direct contravention of the spirit and purpose of such institutions, which are intended only for the

poor and destitute. But as we might expect, the managers contemptuously ignored the respectful appeal of the general practitioners, and, in defiance of it, invited all to enter who had the sovereign to pay.

In the meantime, the resources of St. Thomas' Hospital have become reduced in spite of the prostitution of the endowments of that institution to support pay wards, and, notwithstanding the piteous appeal of the Duke of Connaught for contributions, money has not been forthcoming.

In America those colossal infirmaries and smaller fry which appeal to the public for support are working incalculable harm to legitimate practice. The wail of the colleges that clinical material must be had is a deception. As a matter of fact there is an excess of material for teaching among the destitute poor and needy.

Some of our leading medical journals have been finally moved to open sieges on the medical colleges and hospitals. The "Medical News" attacks hospital managers and college faculties in a merciless manner, and the "Journal of the American Medical Association" falls into line, laying the lash on unsparingly, particularly, and unjustly we think, in the case of post-graduate schools.

In New York city, at the last meeting of the County Medical Association, the management of the principal public, college and private hospitals and dispensaries was fiercely denounced. They were charged with deceiving the public, abusing a trust, demoralizing and pauperizing the medical profession; and a committee was organized, with Dr. Douglas H. Stewart as chairman, to immediately institute a searching investigation into the whole subject, and if ground for action was later found necessary, to rally the whole force of general practitioners to meet and crush the evil which threatens their near extinction, or will make it impossible for one to maintain a respectable existence in his profession. We understand that the committee will force this matter on the notice of the city government, and in the winter seek legislation at the capitol.

In all our larger cities, and indeed

in many of our smaller villages, sanitariums, women's hospitals and various special hospitals, with free dispensaries without number, are cropping up. The methods of some of these unquestionably are, to say the least, rather "shady." In one's morning newspaper, folded up, is a circular notice of the "best free treatment by eminent physicians;" handbills are scattered through the tenements, and frequent newspaper notices of them appear. Now, the serious question arises, What can the profession do, if anything, to remedy the present hospital and dispensary evil? For it would seem that unless some drastic and far-reaching remedy is applied, in spite of our vaunted State laws and examinations, in the very near future we will witness in this country a State charlatanry and quackery contrasted with which the worst ever witnessed would be but a mere shadow.

The council of the British Medical Association has recently declared itself quite impotent to deal with the evil. Any one, it seems, is free to give his time for nothing if he pleases. Ambition to be a consultant or a "professor" it seems is no crime, and of this latter commodity there is no special dearth, for we hear of one of our medical colleges with a staff of fourteen professors, with great pomp and gusto, out of a large class of seven students graduated two.

It had been lately suggested that a way to meet the free dispensary competition would be to have all large cities districted and provided for means of attending all needy applicants. This, it was thought, would cut off some of the supplies of the larger concerns and provide something for practitioners to do, to utilize their excessive leisure.

However, much as we may dislike to admit it, the fact and the truth are that if the principle of free and indiscriminate treatment is right for mammoth institutions, with a large number of physicians attached to them, who are there for what their labors will bring them, it equally applies to the single practitioner as to a few to indulge the luxury and pose as philanthropists.

BONE TUBERCULOSIS.

Mr Konig has lately examined 300 anatomical specimens of tuberculosis in bone, which had been removed by resection and amputation.

He came to the following conclusion, viz.: that in the knee the infection commenced in sero-fibrinous structures, the synovial-membrane. The primary point of selection in all cases involving the joints varies.

By a spread of inflammatory processes there is a fibroplastic transformation of the vascular areolar tissue. With this degeneration the vascular supply is diminished or entirely cut off from the cartilages where they break down and degenerate.

During the space of 18 years Konig had treated 727 cases of bone tuberculosis at his clinic. All these involved the knee. He was able to follow 615 cases. Of these 410 were yet living, about two-thirds. They were treated by various plans; by injection of iodoform, by orthopaedics, by resection, gattago, etc. Of 193 cases treated conservatively 63 recovered; 40 with a movable articulation. Intra-articular injections of pheric acid in 63 cases gave 33 cures. This substance he found preferable to iodoform, which he injected in 40 cases with only 13 cures. In 150 cases he had resected 106 recovered completely. In all those cases of resection there was shortening of from 2 to 20 centimetres. In all his osteotomies of the knee there was mobility and non-union in only one.—*Annales D'Orthopedie et De Chirurgie Practiques*, March, 1895.

* * *

Crocus (*Lancet*, No. 3691, p. 1285) reports a highly interesting case of acute suppurative central osteitis of head of femur in a child in which he was able to cut short a severe attack of coxalgia by an early incision on to the great trochanter, drilling into opening and draining a pus cavity. The augmentation in volume of the head of the bone was so great that it was at first supposed there was a case of para-epiphysitis. The pus cavity was lined by granulations and extended well inward.

The author dwelt at length on the importance of making an accurate diagnosis in all this class of cases, particularly insisting on the differential features between rheumatism and tuberculosis. The diagnosis is only difficult when there is an implication of the superior segment of the femoral diaphysis. Here the bone on its inner surface is so deeply covered by muscles that it is not readily examined.

When the surgeon is once assured that septic osteomyelitis is developed he must lose no time with temporizing procedure, but at once open down and penetrate the centre of destructive changes. By delay the suppurative processes advance upward, penetrate the capsule and infect the joint.

In general, an early operation here will obviate the necessity of either a resection or an amputation.

* * *

Dr. D'Arcy Power (*Brit. Med. Jour.*, No. 1726, p. 412) calls attention to the frequency of a dilatation of the synovial capsule prior to tubercular osseous inflammation of joints in children.

When this is recognized early and a free incision is made, conjoined with antiseptic lavage, a cure is generally prompt and permanent.

He cites four cases which were thus treated and promptly cured in his own practice, while another, in which operation was refused, went on from bad to worse and died.

BIPOLAR OSTEOMYELITIS OF THE TIBIA.

M. Cartillet (contribution *Coc. Des. Scien. Med.*, Lyon, Feb., 1895; *Annales D'Orthop.*, March, 1895) has presented the details of a highly interesting and unusual case of central suppurative inflammation of the tibia in a boy of 16 years of age.

His trouble was of about three months' duration. Cartillet, having diagnosed the case decided that it undoubtedly was one of bipolar suppurative diseases, commenced by tapping the superior epiphysis of the tibia, which was filled with pus; then he went down and trephined the in-

ferior head at the ankle, after which he carried an incision through all the tissues on the inner aspect of the shaft from one opening to the other. Now the entire medullary cavity was opened, dead sequestra and inspissated pus cleared away. After this the hollow cavity was closed with sutures, though the ends were left open for drainage.

Recovery was rapid. The constitutional disturbances immediately subsided, appetite returned and his full strength was regained.

EUROPHEN IN RHUS POISONING.

At this season of the year the physician practising in the country or in one of our numerous summer resorts is frequently called upon to treat cases of dermatitis venenata, or cutaneous inflammation due to the poison ivy or poison sumach. As is well known, some persons are especially susceptible to this affection, which is of an eczematous character. There is marked swelling or odema of the affected parts and an intolerable sensation of itching and burning, and the patient's efforts to relieve these by scratching and rubbing add to the existing irritation and produce extension of the inflammation. Among the favorite methods of treatment of rhus poisoning are lotions of carbolic acid, acetate of lead, grindelia, zinc phosphate, but recently Dr. W. R. D. Blackwood, of Philadelphia, has called attention to the relief he has himself experienced in this affection from the use of euphen. "Some years ago," he writes in the *Charlotte Medical Journal*, June, 1895, "after being fire-proof to this disagreeable complaint I got a dose which made life a torment for awhile. As I had quite a number of surgical cases on hand just then I was handicapped and wished that all such plants as the rhus family were relegated to the centre of Africa. With this trouble in memory, last year I got hold of a bad case of poisoning through sumach, and as an experiment I tried euphen, and with the most satisfactory success. Let

me urge my friends to try this when the summer brings out the new crop of poisoning of this variety." The value of euphen in various affections of the skin has been established by numerous observations, and it is, therefore, well deserving of a trial in cases of so-called ivy poisoning. For this purpose it may be employed in a 10 to 30 per cent. ointment with vaseline, a solution of the same strength in almond oil or a dusting powder with talcum varying from 25 to 50 per cent. according to the degree of cutaneous irritation present.

Electro-Therapeutics.

IN CHARGE OF
DR. S. H. MONELL, New York.

STATIC ELECTRICITY — METHODS OF ADMINISTRATION.

Article 2.
(Copyrighted.)

This subject, usually passed briefly over in most writings upon static electricity, may fairly be considered of great importance to the therapist, and it is my purpose to treat the matter more fully than has yet been done in any article or book that has so far come to my notice.

Physicians accustomed to the administration of electric currents created by chemical action are apt to be somewhat confused when they first attempt the application of static electricity. In both galvanic and faradic administrations the patient is placed in a circuit closed and made operative by the sensible contact of two moist or metallic electrodes with the surface of the body or its cavities.

Similar methods, indeed, are pursued in employing the Leyden jar induction current obtained from the static machine, but in general the method of applying static electricity is in marked contrast to these.

Instead of placing certain tissues or portions of the patient's body between two electrodes, and affecting chiefly or only the included parts, and employing a current with a direct circuit flow and little or no lat-

eral dispersion, we transform our entire patient into one great electrode by seating him upon the insulated terminus of the active pole of the machine.

The other pole is usually connected with the earth and may be wholly disregarded in general treatment. When the machine is started into action a separation of the collected electricity into positive and negative takes place. Each dissociated portion of the electric force, being self-repellent, strives to escape from the inclosing case of the machine by a separate channel, and the result is a continuous flow from the higher to the lower potential. The flow from one-half of the revolving glass plates is carried off to the earth by the chain attached for this purpose to the unused conductor, while that from the opposite half of the plates is conveyed by a conducting rod or chain to the insulated platform, where its downward flow is headed off and a remarkable phenomenon takes place. Unable to pass down the glass supports of the platform to reach the great negative magnet, the earth, the swift output of the machine accumulates like a fast rising flood, escaping upward and outward at every point where the tension of insulation gives way. The accumulation from a powerful machine is thus sufficient to form a great electric pool upon the platform, in which the patient is invisibly bathed, becoming electrified with the same potential as the prime conductor to which he is attached; and he is charged everywhere alike throughout every tissue, filament and fibre of his body, for it is a law in electrics that "the potential inside a conductor has the same value as at any point on its surface."

There is no clothing to remove, no current direction (ascending or descending) to take into account, and no rheostat is required to govern the current strength.

The individual upon the platform is simply permeated from foot to head, not with a galvanic streak shot through him from point to point, but an electric force of illimitable dispersive power, and a penetrating

energy that laughs at the resistance of the human tissues.

Without accumulation there could be no therapeutic employment of static electricity, owing to the small quantity of the current stream.

With these preliminary remarks I shall now attempt to describe the various methods of administration.

Of the usual electrodes furnished with machines two are of paramount importance, viz., the point and ball. The chief routine methods of application are three, viz., electrification, breeze and sparks.

In addition, this form of electricity may be employed in a greater variety of ways by an expert than both the galvanic and faradic currents combined. It will be difficult to describe them all in a limited paper, but it may be stated in general that in static administrations no nicety of skill is wasted. Practice, intuitive perception of what each case requires, discriminating judgment, gentleness, caution, tact and trained mechanical adroitness will all be found of the utmost value in contributing to satisfactory results. Let us select a series of cases for treatment and illustrate the methods we may employ. Before admitting our patient we have first inspected the machine, ascertained that it is charged and in working order. We now place the platform in position in front of the machine and about two feet removed from it. The platform is then attached to the selected prime conductor of our apparatus by means of the rod furnished for this purpose, or, if we so desire, by means of a chain, wire, or any metallic connection. The opposite pole is now grounded, to conduct away the unused potential and establish the current flow. In most cases the negative pole is grounded, as we usually desire to electrify the patient positively. An ordinary chair or stool is now placed upon the platform. It may be any form of wooden, cane, leather, or upholstered chair (rocker, reclining or otherwise), but must be devoid of all metallic ornamentation, such as fancy-headed nails around the seat. We have now only to ask our patient to step upon the platform and sit down.

We see that her dress does not drag upon the floor at any point, to leak off the current, and we are ready to start the machine into action. The plates revolve, a slight crackling sound is heard as the current issues forth, accumulates and escapes; and complete electrification is shown by the loose hairs on the patient's head, which stand tensely out in all directions. The insulated person is agreeably conscious of the electric charge, but experiences no marked sensations. We may subject her to this simplest form of treatment for 15 or 20 minutes, and find that it is an admirable and restful tonic, and that the tenderest infant could not complain that it was unpleasant. It is the foundation and starting point of all static treatment.

But suppose it is the summer season and the day is damp, and on this account we find the electric output too small to charge our patient sufficiently while the rod rests upon the surface of the platform. We can augment the charge by turning the plates faster to increase the flow, and, to prevent loss en route to the patient, we alter the method of connection to a direct metallic contact. To do this the patient may either hold the rod or chain in her hand, or place her foot upon a metal plate, or simply stand on the end of the chain attached to the machine. Either method will at once impart a vigorous increase to the electric charge, as none of the current is now wasted through poor conduction.

If for any reason we wish to reduce the energy of the charge, we reverse the preceding steps, slow down the machine and remove the conducting rod to the distant corner of the platform. Thus all necessary modifications may readily be made, and the effect in practice corresponds to the action of a rheostat or current controller. What we have applied to the patient has, however, been in the nature of a continuous current; and, inasmuch as certain effects are dependent upon intermittent action and rate of electric change in the body, we will now treat our patient with an interrupted current. She is still seated as before, and contin-

ues to be electrified. We make no change in her relation to the machine, but we hold our ball electrode, attached by a chain to a gas fixture, near any part of the positive pole. If we hold it very near we get a rapid succession of exceedingly fine interruptions, every spark representing a complete break in the current. Between this near distance and the longest distance at which we can get a spark—say four or five inches—we may obtain all the variations in interruption that can be produced by faradic vibrators. By sweeping the electrode past the pole a single spark at a time will give us as slow an interruption as may be wished for special purposes. We may also adopt an entirely different method of interruption, and in certain cases we prefer to do so. The patient now holds the platform end of the conducting rod, while the machine end is not hooked upon the pole, but is rested against the case so that it drops a half inch or inch below the pole on its way to the patient. This results in breaking the continuity of the metallic conduction, gives us a stream of sparks, and interrupts the current either finely or coarsely, as we may desire, according to the length of spark drawn. If it requires additional intensity we have only to attract the current out of the patient on the opposite side or above the head, or at any point where local effect is indicated. The force of the flow is instantly increased. These two methods are useful in many ways and will be studied in greater detail later on. In their various forms of applicability they constitute a method original with the author, and are an addition to previous methods employed.

But our patient complains, for instance, of a severe nervous or congestive frontal headache, and requires something more localized than general electrification, which, however, does not stop, but goes right along with every after process, and contributes its quota of benefit to the entire sitting. We take up the point electrode, attach it to a chain, the distal end of which we may hook to the negative pole of the machine; or

to a gas fixture, water pipe, or furnace register, or any metallic body which will conduct the discharge to earth. By now holding the electrode cautiously near the seat of pain we apply to our patient the static breeze. Upon the bare forehead and throbbing temple it plays like a cool zephyr, bringing ease and relief at once in the great majority of cases, and removing pain in from five to 15 minutes. It is the most exquisitely delightful of all electric applications, and is hardly surpassed in importance by static sparks.

FIRST AID IN ELECTRICAL ACCIDENTS.

Hedley (*Lancet*, February 2, 1895) says that the purely medical aspect of electrical accidents may be summed up roughly in Arsonval's rule, that "one suffering from electric shocks should be treated as one who is drowned," not forgetting, however, that syncope rather than asphyxia is sometimes the prominent symptom. If the body of the injured, however, is still in contact with the electrical circuit there are three possible conditions to be considered.

(1) The body by contact with two conductors of different potentials may have short-circuited the current. Such a contact is usually at once fatal.

(2) The body in contact with one conductor may have taken part of the current to the earth. The gravity of this accident will depend upon the nature of the contacts.

(3) The body by being in contact with two points of the same conductor—e. g., holding by both hands—may have become the seat of a derived current. This in itself is the least dangerous of the accidents.

Whatever the nature of the accident, the first thing is to stop the current if possible. If this is not practicable, the body of the injured person must be detached at once from the conductor. The "first aider" must in self-defense insulate himself from the conductor, the body of the injured and the earth. To do this the hands must be covered with several

layers of some dry material, such as several thicknesses of a garment. He must at the same time stand upon some dry wood, clothes, or straw. He may then detach the body from the conductor, and at the same time lift it from the ground. If at all practicable the current may be stopped by cutting the wire, or it may be short-circuited by placing an iron rod between it and the ground.

Surgery.

IN CHARGE OF

DR. T. H. MANLEY, New York.

THE SURGICAL TREATMENT OF PULMONARY CAVITIES.

From a study of the present aspect of the surgery of the lungs, Dandridge (*Annals of Surgery*) concludes that a certain number of pulmonary cavities can be successfully dealt with by incision and drainage. Tuberculous cavities in the lower portion of the lungs, if single and superficial, and if the general condition of the patient permits, should always be opened. Cavities at the apex should only be opened when there is free and persistent fetid expectoration that has resisted treatment and the remainder of the lung is not involved. Abscess, gangrene and hydatid cyst should be opened and drained whenever they can be located. Closure of the pleura should be insured before the evacuation of a cavity is attempted. In case of pyo-pneumothorax the fistulous track should be explored, and any cavity freely laid open by means of the cautery. Cavities that have been opened are best treated by packing with gauze, preferably impregnated with iodoform. The further careful trial of such agents as iodoform, chlorin-gas and zinc chlorid is desirable to determine whether or not the tuberculous infiltration may be modified by them. It is also desirable, for the further extension of surgical interference in pulmonary cavities, that the means of locating such cavities and of determining their size and the exact character of the tissue that overlies

them should be perfected by further study and for the accomplishment of this, the surgeon must look to the physician.

THE HISTORY OF VAGINAL HYSTERECTOMY.

Vaginal hysterectomy is now recognized as one of the triumphs of modern surgery. This operation, according to Greig Smith, was performed for prolapse before the Christian era. This operation, brought forward in 1813 by Langenbeck, like almost all noted operations, passed through many vicissitudes. It has been successful in the hands of some and unsuccessful in the hands of others. Langenbeck was very skillful in performing the operation, while many French and German surgeons met with poor results. This brilliant operation fell into disrepute until fifteen years ago Czerny took it up. The mortality was at first very high, but now it is just as low, so low, in fact, that some surgeons of Europe perform it on diseases other than cancer. Among those prominent in its improvement are Pean, Segond, Jacobs, Sanger and Landou. I think Jacobs claims to have removed the uterus, tubes and ovaries, per vaginum, in 140 cases, with a death rate of only 14 per cent. The opinions among leading surgeons at the present time seems to be that the entire uterus should be removed and partial operations should be abandoned. By removing the entire organ we get a lower mortality and better results.—Charlotte Med. Jour., June, 1895.

THE NATURE OF CANCER.

The dreadful malady still remains a great mystery to the many scientists. Dr. Duplay, of Paris, expressed the opinion at the International Congress, held in Buda Pesth, that, judging from recent microscopical and experimental work, the etiology of cancer still remains unsolved. In his opinion the theory of the existence of sporozoa in cancer, which by some is accepted quite readily, he thinks to be more and more doubtful, as re-

search is pushed further, and it is necessary, since the usual histological methods of fixing and straining have not given satisfactory results, to resort to new methods—in particular, close attention should be given to the examination of fresh tissues. Recent experience is believed by M. Duplay to point strongly to one species cannot be communicated by inoculation to an individual of another species, and that within the same species it can be transmitted from one individual to another only under very exceptional conditions, not yet understood, though hereditary predisposition perhaps plays a certain part. According to the observations of Dr. Yarok, of Buda Pesth, he is satisfied that the bodies regarded as psorosperms in cancer are nuclei, nucleoli, epithelial or migratory cells, red blood cells, or products of degeneration.—North American Medical Review, June, 1895.

APPENDICITIS.

Gay, in the Boston Medical and Surgical Journal of January 31, 1895, emphasizes the fact that a patient with recurring or "sleeping" appendicitis is in constant danger of an explosion, which may prove fatal in spite of the most prompt and skillful treatment.

By way of summary the following facts are given as indicating operation:

1. In very severe cases, immediately.
2. In moderate cases in three or four days, if the symptoms are not progressing favorably.
3. In slight cases, if they do not get well in reasonable time, or do not steadily progress toward recovery.
4. In cases attended with frequent exacerbation without any distinct interval.
5. In recurring cases, and, as a rule, in the interval after the second attack.
6. Cases of doubtful diagnosis, in which the symptoms do not subside within a reasonable time, may be subjected to exploratory incision, with the expectation that more good

than harm will be done in the long run.

7. Patients who must live out of reach of competent medical attendance, as well as those in the humbler walks of life, may require operation under circumstances not otherwise advisable.

SARCOMA OF THE KIDNEY IN CHILDREN.

In a very excellent article on this subject in our valuable contemporary "Medicine," Dr. D. A. K. Steele, of Chicago, concludes as follows:

From the literature of this subject I think we may fairly deduce the following conclusions:

1. These new growths of the child's kidney are often congenital.

2. They are usually unilateral; when bilateral it is from secondary infection of the other kidney.

3. They are primary extra-renal, and surround rather than infiltrate the renal tissue.

4. Round-celled is the most common form of these sarcomas.

5. They are of exceedingly rapid growth, and destroy life by exhaustion.

6. They are uniformly fatal when treated medically, the duration of life being from four to twelve months from the time the disease is first observed.

7. Nephrectomy offers the only hope of cure or prolonging life in these unfortunate cases.

8. More accurate early diagnosis and prompt operative interference has lowered and will continue to lower both the primary and secondary mortality.

9. The extra-peritoneal route is preferable when the tumor is small.

10. When large, a trans-peritoneal incision is imperative.

11. It may be either transverse or vertical; considering the nerve supply of the parts, the transverse would seem the better.

12. The operation of nephrectomy in these cases is justifiable, and we are not doing our duty as surgeons to our little patients if we withhold the only chance for life.

RECTAL RESECTION IN THE FEMALE—VAGINAL METHOD.

Plug the rectum with antiseptic gauze and disinfect the vagina thoroughly. Incise the posterior vaginal wall and separate it from the diseased gut. Incise the perineum in the middle line, and isolate, ligature and divide the rectum below the seat of disease. Draw the upper and cancerous portion of the gut through the vaginal wound and excise it. The advantages of the method are that there is but little hemorrhage, the diseased parts can be freely exposed, an opening in the peritoneum can be easily dealt with, and enlarged glands in the mesorectum can easily be removed.—Universal Medical Journal, June, '95.

OPERATIONS FOR CANCER.

Dr. Roux, of Lausanne, discussed this subject and remarked that the former teaching concerning constitutional cancer, the absence of antiseptics, and the fear of relapse discouraged the most intrepid surgeons from attempting on malignant tumors any but insignificant and palliative operations. From the characteristics of cancer he admits that it is a parasitic disease resembling tuberculosis in its clinical evolution; it is necessary, therefore, to attack it with the same energy and promptness as the latter affection. Too often we operate too late, when it is impossible to prevent a relapse. This fact filled the earlier statistics and continues to darken the present ones. As soon as the diagnosis is assured we should intervene by the bloody method, always making a systematic and carefully-detailed toilet of the ganglionic chain, even if it is healthy in appearance. That the principal cause of relapse in the late period at which we operate is proven by his personal observations upon three groups of cancer cases: those of the breast, the uterus and the gastro-intestinal tube. The operable cases of cancer of the stomach reached 12 per cent.; those inoperable, 88 per cent., a part of which were susceptible of palliative operation. The mor-

tality from pylorotomy for cancer was from one-fifth to one-seventh; that from gastro-enterostomy, one-seventh. For cancer of the uterus there was 68 per cent. of the cases inoperable and 32 per cent. operable, only one-fourth of which were operable by the sacral method. The mortality from vaginal hysterectomy was 8 per cent., and from sacral hysterectomy 11 per cent. As regards cancer of the breast, for which intervention is most easy, he counts twelve absolutely inoperable cases, while in more than 50 per cent. of the cases it was possible to predict an early and fatal relapse. The mortality reached 5 per cent.—that is to say, it was equivalent to the general mortality of all the operations. There is no doubt that early operations will prevent relapses, since in the deplorable conditions under which we now operate we actually have some cures. He cited at hazard cases of gastrointestinal cancer without apparent relapse for three years; cancers of the rectum without relapse after four years; a cancer of the uterus, which had invaded the vesical walls; a villous cancer of the kidneys, of extraordinarily difficult extirpation and without relapse for five years. He had removed the tongue in a case that had relapsed nine years after an operation by Dr. Kocher. Among his cases was one of survival for eleven years from cancerous goitre, and a cancer of the testicle that had not relapsed at the end of twelve years. Histological examination had left no doubt as to the nature of these tumors.—University Medical Journal, June, '95.

THE TREATMENT OF MALIGNANT TUMORS BY THE TOXINES OF THE STREPTOCOCCUS OF ERYSIPELAS.

At a meeting of the American Medical Association, held in Baltimore, Md., May 7 to 10, 1895, Dr. Senn, of Chicago, in a paper on the above subject stated that the treatment had proved unsuccessful in all the cases in which he had tried it. In many of the cases reported as successfully treated by the toxins, the

diagnosis of the tumors had not been verified by clinical or microscopic examination. In nine cases he had used from 25 to 75 injections, of from three to fifteen minims, the toxins being derived from three different sources. He not only failed to effect a cure, but in some instances the condition seemed to be aggravated by the injections. He resorted to the treatment only in inoperable cases.

In the discussion of the paper, Dr. Celey stated that he had treated 84 cases during the past four years. They were all malignant—43 sarcomas and 27 carcinomas. Eleven sarcomas and two carcinomas were cured. Three of the cures, at present, were of two years' standing, with no symptoms of recurrence. Until the present, he had advocated the use of the toxin in nothing but sarcoma.

Dr. Fenger, of Chicago, had used the remedy in twelve cases without benefit.

Dr. Wyeth, of New York, suggested that the injections might do good through their inflammatory action, destroying the rank cells of the tumor.

Dr. Herring had seen an attack of erysipelas aggravate a large malignant growth upon which he had operated unsuccessfully.

Dr. Keen stated that the remedy had failed in his hands in sarcoma and carcinoma, except possibly in one instance.—University Medical Magazine.

Medicine.

IN CHARGE OF
DR. E. W. BING, Chester, Pa.

THE ALTERNATING TREATMENT OF DIABETES.

ROBIN.

Buil. de L'Acad. de Med.

I.—INDICATIONS FURNISHED BY NUTRITION.

"The treatment of diabetes which I am about to submit has no new methods, but consists simply in the employment of means already known, but associated in a particular man-

ner and selected according to the action they exert over nutrition.

Excluding pancreatic diabetes, which forms a class apart, two theories are in favor among physicians, to wit: the hypersecretion of sugar and the deficit of consumption by retarded processes of nutrition.

From which there have arisen two totally opposite systems, one of which is to moderate the production of sugar by retarding nutritive changes, the other to accelerate the combustion of sugar by stimulating general nutrition. Before commencing treatment choice must be made between these theories. The study of the systematic changes in the patient is made use of to settle the question. If the disease is due to a failure in the consumption of sugar the changes should be retarded and vice versa. But in 1889 I showed that there was in true diabetes an exaggeration of all the chemical acts of general nutrition, with over-activity of certain organs, as the liver and nervous system. This should be the point aimed at in treatment, therefore drugs should be chosen among those agents which retard the general mutations, and particularly those of the nervous system, and at the same time by appropriate regime substances convertible into sugar, are withdrawn, giving the hepatic cells rest and reducing their over action.

II.—ORGANIC DEMINERALIZATION IN DIABETES.

There is in this disease a marked tendency to this process. As the inorganic principles form a skeleton to the cells and are one of the essential constituents it is important that this loss be obviated. The process may be seen in pretubercular demineralization and albuminuria of phosphatic origin. In a disease like diabetes where tuberculosis frequently appears as a complication this process should not be lost sight of, and the elements which are wanting should be administered.

III.

Indication in diabetes is best fulfilled by the following agents:

Antipyrin, alkalies and alkaline

baths; bromide potassium, arsenicals, opiates, antispasmodics, quinine and cod liver oil. To obtain the maximum effect these must be separated into three principal groups—The first consists of antipyrine; the second consists of arsenicals and quinine; the third consists of the antispasmodics.

IV.

Alternating treatment in stages—the first is the essential of this treatment. Antipyrine—It lessens general disassimilation—the co-efficient of oxidation or of utilization of albuminoid matters and the oxidation of sulphur and phosphorus, proof of its moderating action on the mucous system. It is given in doses of two grammes per day, three being the maximum. It may be combined with bicarb. soda. It should not be continued for more than five days at a time, as it may produce transitory albuminuria. Contra-indications to its use are albuminuria, rapid emaciation, anorexia and pancreatic diabetes. The adjuncts of this first step in treatment are cod liver oil, alkalis and laxatives.

V.

Second step in alternating treatment consists in giving, after the cessation of the antipyrine treatment, quinine arsenicals, which will reduce the functional activity and retard the chemical changes. With these laxatives may advantageously be combined. This period of treatment, like the first, lasts for 15 days, and now the third is employed. This consists of sedative and antispasmodics. General results from this method have been favorable.

TREATMENT OF NOCTURNAL INCONTINENCE OF URINE IN CHILDREN.

Cheron (*L'Union Medicale*, April 6, 1895) divides the treatment into—

(1) Mechanical—This is usually considered useless and brutal, but the meatus may be occluded by colodion at bedtime, which can be removed in the morning or an elastic bag may be introduced into the rectum or vagina (?). Tienhovvers con-

sidered incontinence due to insufficiency of the vesical sphincter; he lifts the foot of the bed at night, and thus secures good results in many cases.

(2) Hygienic Treatment — The amount of liquid should be limited, and none taken with the evening meal. Cold perineal douches should also be given. The child may be wakened once or twice during the night. The sphincter may be educated by retaining the urine as long as possible in the day.

(3) Moral Treatment—The child should not be punished. The hypnotic suggestion has been tried in a number of cases, with excellent effect.

(4) Medical Treatment—Belladonna and atrophine can be used in such a way as to get their full physiological effect. Strychnine in full doses can also be given with excellent effect. Antipyrin, thirty grains, may be given in the course of ten days. Chloral and bromides may be given where there is a sensibility of the mucous membrane of the bladder.

(5) Electrical Treatment—Either the constant or faradic current may be used, and must be applied directly to the sphincter. Massage of the sphincter directly by introduction of one finger into the rectum may be practiced. Several other methods which seem to the abstractor would be rather harmful, morally, than beneficial.

TREATMENT OF PHAGEDENIC CHANCRE.

Dr. E. Braatz (Centralblatt Fuer Chirurgie) warmly recommends treating phagedenic chancres with topical applications of cupric sulphate. He employs a solution, for with the powder a crust is formed, under which the ulcer continues to progress. The ulcer is cocaineized with a 10 per cent. solution, the undermined edges trimmed away and then the ulcer cauterized with a 1.5 solution of the sulphate; compresses are afterwards applied, wet with a 1.5000 solution. These latter at first renewed three times a day, later once a day, and are covered with a strip of rubber

protective. As the pain of cauterization often continues some time after the cocaine has ceased to act, a morphine injection may be given either before or after. On account of the obstinate character of the affection the cauterization may be required to be repeated several times before the process is cured.—Ex.

ABORTIVE TREATMENT OF GONORRHEA.

Guiard's treatment of gonorrhea by means of frequent washings out with weak solutions of permanganate of potash is certainly the most effective way to abort gonorrhea. He uses a vessel of a capacity of about 2 litres for holding the solution; attached to this is a rubber tube 2 metres in length, fitted with a glass cannula and tap, so arranged as to be workable by the same hand that holds the nozzle in the penis. If the inflammation is confined to the anterior urethra, only a small quantity—about 5 or 6 grammes—is allowed to flow in, and then immediately voided. About half a litre is the utmost that should be used at one sitting. The best results are obtained with weak solutions, for example, 1 in 10,000, the maximum being 1 to 5000. There should be two washings on the first, second and fourth day. On the third and last four days of the eight days' treatment only a single washing out is advised. The results obtained are very satisfactory. The stains produced by the solution may be removed by a 20 per cent solution of bisulphide of soda.—Charlotte Med. Jour., June, '95.

APPLICATION OF LEECHES.

The application of leeches to the temple is often of great service in relieving pain and subduing inflammation in the eyes and their appendages. The leech is best applied by putting it in a large test tube partly filled with water. When this is tilted so that its open end and the mouth of the animal come in contact with the skin of the temple, the leech feels so much at home in his native

element that he promptly bites the skin when he touches it and sucks himself full of blood. Artificial leeches are small cylindrical cups applied over a cut in the skin, made either by dividing a fold of it with a bistoury or by cutting it with a revolving circular knife constructed for the purpose. In using the latter care should be taken not to cut to an equal depth all round, otherwise the little wad of skin thus made is so far drawn above the level of the surrounding skin by the exhaustion of the cup as to cause an unnecessary difference of level and subsequent deformity. (Exhibition of Heurteloup's artificial leech).—*Universal Med. Jour.*, June, 1895.

CONCLUSIONS ON VENEREAL DISEASES.

BY DR. J. T. JELKS.

Hot Springs Med. Jour. (vol. iv., No. 5.)

1. That venereal diseases are as old as prostitution, and that the latter is as old as the human race.
2. That clandestine prostitution is much more dangerous to the health of the community than licensed and medically inspected women.
3. That while we quarantine against small-pox, scarlet fever, diphtheria, yellow fever and cholera, and the State attempts to prevent the spread of the same, yet
4. We hold up our hands in holy horror at any attempt to regulate the "social evil."
5. That police supervision and medical examination of prostitutes should be practiced by every community.

THE RADICAL TREATMENT OF LUPUS.

R. T. Cesar (*Lancet*, April 6, 1895) refers to Mr. Bidwell's report of six cases in the *Lancet* of July 21, 1894, and to his statement that Mr. Watson Cheyne is credited with being the first to operate on lupus by excision and skin-grafting. The writer states that twenty years ago he operated on a man, aged 62 years, with lupus of the face; it was "much larger than a half-crown piece." He made a deep

incision all around the edges, and then dissected up to the floor of the ulcer entire. Dry antiseptic dressing was applied and a permanent cure resulted.

Ten years ago he treated a lupoid ulcer two and a half by one and a half inches in extent, on the cheek of a boy, aged 8 years, in the same manner. He thinks this treatment better than curetting, and he does not regard skin-grafting as essential.

OPEN-AIR TREATMENT OF WHOOPING COUGH.

Ullmann, after pointing out the failure of all suggested "specifics" for whooping cough, and the little effect which drugs of any kind have on the frequency or the severity of the paroxysms of cough or the duration of the disease, proceeds to urge (*Jahrb. f. Kinderheilkde*, Bd. xl, H. i, S. 39) the value of open air (*freiluftcur*). He relies chiefly on the consideration that under ordinary circumstances the patients have fewer paroxysms during the hours in which they are out of doors. To establish this he quotes records of the paroxysms in certain cases. Thus, in one case, while indoors, the child (aged 18 months) had a paroxysm on an average every 48 minutes, while out of doors it had one every 91 minutes. In another severe case the child had nearly three times (2.74:1) as many paroxysms indoors as out of doors. In a mild case the difference was less (1.4:1). The difference in all the cases varied on different days, but it was on the whole sufficiently marked to strike and convert the parents, at first disposed to distrust the advice given. He states that a threatening paroxysm may be arrested sometimes when in the house by carrying the child to an open window, where it takes several deep inspirations, and the feeling of distress and anxiety which precedes the paroxysms passes off. Ullmann recommends that in summer and on fine days in winter the patients should be kept out of doors—not for a few hours only, but from morning to evening. He attaches much importance to their being given their meals out of doors. The parox-

ysm of cough and vomiting which so commonly follow a meal is thus in many instances avoided, and the serious deterioration of general nutrition liable thus to be produced is prevented. He does not look on bronchitis or even broncho-pneumonia as a contraindication of the open-air cure.

INTRAVENOUS SUBLIMATE INJECTIONS.

Gorl (Munch. med. Woch., May 14, 1895), gives details of nine cases of various forms of syphilis which he has treated in this way. He uses a solution of sublimate of 1 in 1000, and injects 1 to 2 to 5 c. cm. As experiments have shown that the sublimate is not entirely excreted in the urine on the first day, the author gave the injections every second or third day. He has never seen unpleasant symptoms. The pain that was complained of in Blaschko's cases the author would attribute to the strong solution used. If the vein is properly entered no pain is felt. The pain is caused by the escape of the solution into the connective tissue. The advantages of this method of treatment are (1) the small quantity of sublimate used; (2) the rapidity of the cure; (3) the absence of danger so far as at present known, and (4) that the treatment can be carried on without interfering with the patient's occupation. The disadvantages are (1) the impossibility of making the injections if the veins are not accessible; and (2) the rapid appearance of relapses. The latter is the most serious objection. These injections are to be used only when the intramuscular or subcutaneous injections are objected to owing to pain, or when inunction or administration by the mouth is impossible. They are also indicated in the tuberculous or in those peculiarly susceptible to mercury or when a rapid effect is necessary, as in cerebral syphilis.

TYPHOID ANTITOXIN.

Peiper and Beumer (Wiener klin. Rundschau, May 12, 1895), at the Congress for Internal Medicine at

Munich, referred to their earlier experiments, which showed that the toxin of typhoid cultivations is contained chiefly in the bacilli themselves, for after passing a cultivation through a Chamberland filter the filtrate was less virulent than before. The bacilli are killed, without damage to the virulence of the cultivation, by warming for an hour at 55 degrees to 60 deg. C. Their recent experiments show that by repeatedly injecting small quantities of virulent cultivations into sheep antitoxic substances are formed in the organism which prevent the poisonous action from showing itself. The action of this antitoxic serum depends on its power of destroying not the bacteria, but the poison. By injecting previously or at the same time antitoxic serum, mice and guinea pigs were protected with certainty against double or treble the fatal dose of a virulent cultivation, and even if injected with the antitoxin one to four hours after the fatal dose was given, they could be cured.

Miscellany.

FURTHER CONTRIBUTIONS ON HELIUM.

New discoveries, however astonishing, soon get left behind by the advancing army of science, like milestones on the road of progress. Scarcely have we overtaken argon and helium when Professor W. Ramsay is promising us not one but two new elements belonging to the same series. According to his paper, read before the Chemical Society on June 20, there is no doubt that argon and helium contain as a common ingredient a gas not hitherto identified, with a probable atomic weight of about 10 referred to hydrogen as unity; for two lines in the spectra of the newly discovered elements are absolutely identical. From the anomalous position of argon in the periodic scale, Professor Ramsay regards the presence of another element with argon, having an atomic weight of a little more than 80, as almost certain,

and, indeed, this would account for many discrepancies. The velocity of sound in helium has been determined, and it has been proven that helium, like argon, is monatomic, and that all its energy is taken up in motion of translation, there being no internal work. It follows from this that the hypothetical element common to the crude helium and argon is also monatomic. The density of helium is about 2.2 as far as we can tell at present, and not 3.9 as wrongly reported previously. When the second element has been separated from helium its density will be brought down still lower. To clear up a possible misconception we may state that argon has never been obtained from any other source than the air, and that helium has been extracted from various rare minerals by the action of acids. It is impossible for helium to exist in our atmosphere, as the gravitational force of the earth is not able to keep these light atoms, which are thrown off into space by the centrifugal force of the earth's rotation. All the uncombined helium of our planetary system is probably concentrated in the sun, unless that enormous planet Jupiter has managed to retain some. It is interesting to note that helium is by far the most insoluble gas known, for water dissolves only about half as much helium as hydrogen or nitrogen. This will afford a convenient means of separating helium from other gases, and as it seems to be contained in many rare minerals of the uranium and thorium type we may hope that before long larger quantities will be available for the purpose of experiment. Besides the isolation of the two hypothetical gases we have spoken of, Professor Ramsay looks forward to investigating the actual condition in which helium exists in minerals, for he has found that these substances will not reabsorb helium when once it has been extracted from them. The last meeting of the British Association was marked by the discovery of argon, and it is reasonable to hope that the forthcoming session may witness further additions to our knowledge of these remarkable gases.—Lancet.

THE COTTON STATES EXPOSITION.

For the past ten days a perfect deluge of water from the Atlanta City Water Works, has been pouring into the lake at Piedmont Park, the site of the Cotton States and International Exposition at Atlanta, and in a short time the immense basins which make up the two lakes will be filled with crystal water. The lake extends for nearly half a mile along the foot of the immense central plaza, skirting many of the principal buildings. It will be covered with gondolas and electric launches, and will be one of the features of the Exposition. In the centre of the main basin will be the electric fountain, designed by the constructor of the electric fountain at the World's Fair. This fountain will throw a solid stream of water a hundred feet high in the air, and innumerable sprays and side jets, brilliantly illuminated from below the surface of the lake by electric lenses, will add to the gorgeous beauty of the fountain.

A regular hospital will be established on the grounds, and an ambulance corps organized to take care of any persons suffering from sudden illness, accidents or other troubles requiring medical attention. The corps will be very efficient, and will doubtless be of great service.

One of the greatest spectacular performances at the Cotton States and International Exposition will be the reproduction in fireworks of the storming of Wei-hai-wei in the recent war between China and Japan. The performance will begin with the first night of the Exposition and continue every night for nearly a month. Immense scaffoldings will be erected on the north end of the lake, on which will be stretched the painted scenery of the company. The position is one that may be plainly seen from almost any part of the grounds. Hundreds of real Chinese and Japanese will be in the production, and the sight will be extremely realistic. The attack of the Japs will be made from the lake in ships modelled after the Japanese war vessels. The storming

parties will land and in the face of a terrific cannonade and the City of Wei-hai-wei will be taken by storm. Over a thousand dollar's worth of fireworks will be burned at every performance. It is probably the grandest and most realistic scenic production of the age, and will be one of the greatest attractions in the spectacular way at the Exposition.

SOMATOSE BISCUITS.

We are in receipt of a package of Somatose biscuits from W. H. Scheffelin & Co., New York. These biscuits contain ten per cent. of Somatose, which is a tasteless and odorless extract of meat, consisting of its albuminous or nourishing elements and its nutrient salts in a concentrated and digestible form. Somatose is much more nourishing than meat; does not overtax the stomach, and can be administered in gastric and intestinal troubles where meat would not be tolerated. It is completely utilized in the system and produces a rapid gain in flesh and strength.

Somatose biscuits have been prepared with a view of supplying an agreeable, appetizing and nourishing food for invalids and feeble persons. They constitute an important addition to the diet in wasting diseases, such as consumption, anaemia, and during convalescence from acute diseases. As they are readily digested and assimilated, much benefit will also result from their use in affections of the stomach and intestines, as dyspepsia, chronic diarrhoea, etc.

CORRECTION.

The price of "The King" fountain syringe, with thermometer attachment, sold by the C. R. Parmele Company, of New York, is \$2, instead of \$2.25, as incorrectly stated in our June 29 issue. This places the instrument on a basis with other syringes in price.

THE SERUM TREATMENT OF DIPHTHERIA.

Leichtenstern and Wendelstadt (Munch. med. Woch., June 11, 1895) report their experience based on 123

cases, and contrast their results with those obtained in 1353 cases before the serum period. For the purpose of comparison they divide these 1353 cases into 11 groups containing 123 cases each.

The cases of diphtheria admitted into the Cologne Hospital show very little variation in severity; in about 32 per cent. of the cases the larynx is involved. The diagnosis of diphtheria rests as hitherto upon clinical evidence. The authors maintain that they have seen improvement in the general and local condition of the patient as frequently before as since the introduction of the serum treatment. They cannot say with Kossel that every recent case of true pharyngeal diphtheria can be cured by the antitoxin used in sufficient amount, but they think that their results would have been even better if it had been possible to treat the cases earlier. The mortality among the 1353 cases amounts to 30.9, whereas in the 123 treated with the serum it was 20.3 per cent. The authors point out that the lessened mortality was not due to slighter cases coming under treatment. The number of tracheotomies amounted to 30 per cent. in the serum period as against an average of 32 per cent. previously. Contrary to other observers, they found that the mortality was not materially lessened. The mortality among the tracheotomized, however, fell from 64 to 43 per cent. This they would attribute to the arrest of the extension of the membrane into the bronchi. The effect of the local curative action is seen in the diminished number of the tracheotomized and in the lessened mortality after tracheotomy. Their experience shows that the serum is really entirely harmless. The authors also state that during the past fifteen years they have tried the various methods of treatment from time to time advocated, but that before the introduction of the serum very little change was noted in the mortality. In *Het Keekblad van het Nederlandsch Tydschrift von Geneeskunde*, April 6, there is a report of the results obtained with Berhing's serum in the Children's Hospital, Amster-

dam, from October 24 to December 28, 1894. During that period 31 cases were treated, of which 6 died. The Loeffler bacillus was found in 20 out of the 31 cases. In 5 the diphtheria bacillus was present alone; in 10 it was combined with streptococci, in 2 with staphylococci, and in 3 with streptococci and staphylococci. There were two deaths, both of children under one year. Intubation and tracheotomy were performed in 11 cases. In six cases the symptoms of stenosis disappeared very soon after the injection of the serum, and in three in so marked a manner that tracheotomy, which seemed indicated, was dispensed with. The effect of the serum was equally remarkable in five cases in which no diphtheria bacilli had been found. A typical fall of temperature had been observed in very few cases, whilst in one case an alarming rise took place. The influence on the pulse and respiration was nil. In five cases the effect was decidedly unfavorable, producing collapse and cyanosis. Albumen was found in the urine in 16 cases; skin eruptions appeared in four cases as (1) an extensive infiltration at the place of injection, (2) urticaria, (3) a large macular eruption which appeared and disappeared several times, (4) a macular exanthem, accompanied by pain and stiffness of the larger joints. Paralysis, impeding deglutition, was noted in a few cases as after-complications.

RECOVERY FROM A LARGE DOSE OF COCAINE.

Walker (Lancet, February 2, 1895) cites a case of a man who had swallowed eight or nine grains of cocaine. His symptoms were constriction of the throat and region of the heart; great difficulty in swallowing; mental dullness. The pupil light-reflex was absent and the pupils were dilated. His appearance was that of a person partly under the influence of alcohol, but the most striking feature was the state of the muscular system. He resembled a bad case of chorea; the movements were slower; however,

and more regular. The body was alternately rotated from side to side and bent at the same time, while the arms and legs were not still for a moment. He appeared to be constantly masticating, but could not swallow. There was some lividity of the lips. Amyl nitrate was administered with immediate benefit. All of the symptoms disappeared in about five or six hours.

ANTI-KAMNIA--QUININE-SALOL

The well-known therapeutical properties of these drugs make this combination desirable in such intestinal affections as fermentative dyspepsia, diarrhea, dysentery, duodenal catarrh, cholera infantum and typhoid fever. The Antikamnia controls the pain as effectually as morphine, and yet is never followed with any of those undesirable effects so characteristic of opium and its derivatives. Freedom from pain saves an immense amount of wear and tear to the system and places it in a much better position for recovery. The Salol acts as an antiseptic and removes from the intestinal canal the first or continuing cause of the affections just mentioned. The Quinine acts as a tonic, increasing the appetite, and thus contributing much to a speedy recovery. Hare says that quinine is not only a simple bitter, "but also seems to have a direct effect in increasing the number of the red blood corpuscles." A tablet composed of Antikamnia two grains, Quinine Sulph. two grains and Salol one grain allows of the easy administration of these drugs in proper, proportionate doses.

MICROBIC PATHOLOGY.

We have serious reasons for believing that adhesion to exclusive bacillary pathology does not obtain better results than clinical medicine in the great majority of cases, and, moreover, compromises the constitution of our patients.—Journal de Medicine de Paris.